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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,845	04/27/2005	Volker Winter	26486U	2419
20529	7590	07/03/2007	EXAMINER	
NATH & ASSOCIATES 112 South West Street Alexandria, VA 22314			KOSLOW, CAROL M	
		ART UNIT	PAPER NUMBER	
		1755		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/520,845	WINTER, VOLKER
	Examiner C. Melissa Koslow	Art Unit 1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-17 and 22-30 is/are rejected.
- 7) Claim(s) 18-21 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____                          |

The references cited in the information disclosure statement have been considered with respect to the provided English abstracts.

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in the EPO on 23 December 2002. It is noted, however, that applicant has not filed a certified copy of the European application as required by 35 U.S.C. 119(b).

The disclosure is objected to because of the following informalities: Paragraph [0010] refers to the claims. This is improper since the claims and claim numbering may change during prosecution and the final claim 1 would not be the same as original claim 1, which is being referred in the specification. Appropriate correction is required.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 27 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

In the claims, the narrow phrase or number range after the terms "in particular" and "preferably" have been given no patentable weight. This is because the phrase or number range after the terms are examples of the broad term or range and claims are given their broadest interpretation. Applicants may add dependent or independent claims directed to the above narrow phrase or range.

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Claims 1, 3, 27 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 27 provides for the use of the modeling material, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 1 is indefinite since it is unclear as to the meaning of "wax-like". It is unclear what aspect of wax is being claimed.

In claims 1, 3, 27 and 30, it is unclear whether the limitations following the phrase "preferably" are part of the claimed invention. See MPEP § 2173.05(d).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 8, 11, 13, 14, 22 and 25-29 are rejected under 35 U.S.C. 102(a) as being anticipated by DE 10,044,605.

U.S. patent application publication 2004/0012127 is the English equivalent for this reference and thus is the translation for DE 10,044,605.

This reference teaches a composition comprising zirconium silicide, zirconia, paraffin wax and polyethylene glycol stearyl ether. The zirconium silicide, which is a compound of a

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metal from the fourth transition group, reacts with atmospheric oxygen so form zirconia and so as to lead to an increase in volume. The mixture is melted at 80°C which means it has a solidification point in the claimed range. Since the composition is that claimed it must have a linear expandability in the claimed range and is capable of being stored in the solidified state, absent any showing to the contrary. The examples teach the silicide particles are dispersed in the paraffin wax. The composition is used as a modeling material for dentures and ceramic fillings. The reference teaches the dental material is produced by introducing the molten mixture of silicide, wax, zirconia and polyethylene glycol stearyl ether into a negative mold of the desired final product and sintering the molded body in an oxidizing atmosphere. The reference teaches the claimed material, use and method.

Claims 1-11, 22 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 4,324,438.

This reference teaches a composition for making dental replacement parts comprising oxidizable metals, metal suboxides and/or metal hydroxides and a binder. The examples teach the binder can be methacrylate, a substance with thermoplastic properties and the oxidizable substance can be titanium metal, aluminum metal or titanium suboxide  $Ti_2O_3$ . The examples teach the material can also contain ceramic particles, such as magnesium titanate, magnesium oxide or zirconia. The examples teach the mixture is produce by dispersing the inorganic powders in the methacrylate. The search report indicates that this reference teaches the subject matter of claims 7-10. Since the composition is that claimed it must have a linear expandability in the claimed range and is capable of being stored in the solidified state, absent any showing to the contrary. The reference teaches the claimed mixture, process and use.

Claims 1-5, 11, 22, 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 59-145703.

The abstract for this reference teaches a material comprising an oxidizable metal, such as titanium; an inorganic oxide, such as clay, feldspar or talc; and 10-100 wt% per 100% metal of a thermoplastic binder. Since the composition is that claimed it must have a linear expandability in the claimed range and is capable of being stored in the solidified state, absent any showing to the contrary. The composition is formed by dispersing the metal and oxide in the binder. The reference teaches the claimed mixture and process.

Claims 1-8, 11, 12, 16, 17, 22, 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 55-7579.

The abstract for this reference teaches a mixture of 60-95 vol% alumina, 5-40 vol% titanium nitride and paraffin, as a binder. Since the composition is that claimed it must have a linear expandability in the claimed range, a solidification point in the claimed range and is capable of being stored in the solidified state, absent any showing to the contrary. Page 3 teaches the titanium nitride has a particle size of 1.2 microns, which falls within the claimed range. The composition is produced by dispersing the alumina and TiN in the binder. The reference teaches the claimed material and process.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 23, 24 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 10,044,605.

As discussed above, this reference teaches the claimed method. The reference teaches the sintering temperature range is 1000-1650°C, which overlaps the claimed range. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). The examples indicate that the mixture of wax and powder can be present in the solid state. One of ordinary skill in the art would have found it obvious for this solidified mixture to be in the form of granules since this is a convention and convenient way of storing the mixture in a dental office and granules melt more evenly than a solid body of the mixture. One of ordinary skill in the art would choose a size of granules that allow most even melting and takes up the least storage space. This size range appears to overlap the claimed range. The reference suggests the claimed material and process.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 59-145703.

As stated above, this reference teaches a material comprising an oxidizable metal, such as titanium; an inorganic oxide, such as clay, feldspar or talc; and 10-100 wt% per 100% metal of a thermoplastic binder. When this amount is converted to volume percent, it appears that the amounts would overlap the claimed range, absent any showing to the contrary. Product claims with numerical ranges which overlap prior art ranges were held to have been obvious under 35 USC 103. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA

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1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960). The reference suggests the claimed composition.

Claims 18-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

There is no teaching or suggestion in the cited art of record of a material having the composition of claims 18-21.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk  
July 2, 2007

  
C. Melissa Koslow  
Primary Examiner  
Tech. Center 1700